Title (en)

FLASH MEMORY ERASE WITH CONTROLLED BAND-TO-BAND TUNNELING CURRENT

Title (de)

FLASH-SPEICHERLÖSCHUNG MIT GESTEUERTEM BAND-ZU-BAND TUNNELSTROM

Title (fr)

EFFACEMENT DE MEMOIRE FLASH AU MOYEN D'UN COURANT COMMANDE, AVEC TRANSITION DE BANDE A BANDE PAR EFFET TUNNEL

Publication

EP 0840929 A1 19980513 (EN)

Application

EP 96920413 A 19960522

Priority

US 9607490 W 19960522

Abstract (en)

[origin: WO9744791A1] Substantial reduction in peak current encountered during an erase process for a flash memory device is achieved by selection of source voltage potential (ARVSS) during the erase according to the expected band-to-band tunneling current encountered during the process. During the beginning of the process, a lower source voltage potential is selected, which is high enough to cause significant erasing while suppressing band-to-band tunneling current in a portion of the array, and during a second part of the erasing process, a higher source potential is utilized, which ensures successful erasing of the array, without exceeding the peak current (IPP) requirements of the power supply (VS) used with the device.

IPC 1-7

G11C 11/34; G11C 7/00

IPC 8 full level

G11C 16/16 (2006.01); **G11C 16/30** (2006.01)

CPC (source: EP)

G11C 16/16 (2013.01); **G11C 16/30** (2013.01); **G11C 16/3445** (2013.01)

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

WO 9744791 A1 19971127; DE 69618206 D1 20020131; DE 69618206 T2 20020808; EP 0840929 A1 19980513; EP 0840929 A4 19990630; EP 0840929 B1 20011219; JP 3848374 B2 20061122

DOCDB simple family (application)

US 9607490 W 19960522; DE 69618206 T 19960522; EP 96920413 A 19960522; JP 54226097 A 19960522